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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,391	11/25/2003	Jae Kyum Kim	K-0565	4272
34610	7590	10/10/2006		
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153				
			EXAMINER HECKERT, JASON MARK	
			ART UNIT 1746	PAPER NUMBER

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/720,391	Applicant(s) KIM ET AL.	
	Examiner Jason Heckert	Art Unit 1746	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 recites the limitation "protrude from the cover" in line 2 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Roberts. Roberts discloses a device for use in a standard washing machine, specifically installed inside a drum, tub, or wash basket 12. Said device comprises a ceramic tile 10 and receivers in the form of adhesive strips 20 and 22. Said adhesive strips are permanently attached to the inner surface of the wash basket (col. 3 line 4-5). As depicted in Fig. 4, the adhesive is placed along a circumferential direction, in an axial direction, and a predetermined space is left between each strip.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Aouad et al. Roberts discloses the use of ceramics and associated plurality of receivers in a drum-type washing machine as discussed above, but does not disclose a housing. Aouad et al. disclose a housing (Fig. 1) for various wash aids to be fixed to the drum in a drum-type washing machine. The housing has a flat side to be fixed to the inside of the drum, and a circular curved front that protrudes into the center of the drum along an axial direction. Figure 3 details various other parts of the housing including cover 31, holes 38, and opening 32, which is capable of receiving wash aids. It would have been obvious to one skilled in the art to modify Roberts and include housings as a ceramic receivers, as described by Aouad et al., to contain various ceramic media other than singular tiles.

7. In regards to claim 8 – 10, hooks fixing to holes and guide grooves are notoriously well known in the art. Furthermore, their use is functionally equivalent to the adhesive strips 20 and 22 disclosed by Roberts and pegs 404 and holes 405 disclosed by Aouad et al. Also, rearrangement of parts was held to have been obvious. *In re Japikse* 86 USPQ 70 (CCPA 1955). It doesn't matter if hooks, pegs, or grooves are formed on the inside of the drum with their respective counterparts formed on the

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housing or vice versa, as all are obvious choices achieving the end result of adhering the housing to the drum. It would have been obvious to modify Aouad et al. and use guide grooves or hooks to adhere the housing to the drum, as taught by convention.

8. In regards to claim 11, rearrangement of parts was held to have been obvious.

*In re Japikse* 86 USPQ 70 (CCPA 1955). Aouad et al. discloses all of the parts described in the claimed invention. Simply orienting them in a different manner cannot be considered novel. It would have been obvious to modify Aouad et al. and orient the housing so that the cover adheres to or is built into the drum, to provide a solid connection between the housing and the drum.

9. In regards to claim 12, reinforcement ribs, as well as other structural reinforcements, are used conventionally throughout the art to increase the structural integrity of a variety of apparatuses and cannot be considered novel. It would have been obvious to modify Aouad et al. and provide a structural reinforcement on the cover in order to increase structural integrity.

10. Claims 13 -16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts in view of Kobayashi and further in view of Kikuta. Roberts discloses the use of a ceramic in a washing machine, but does not discuss materials nor disclose the use of particles or beads. Kobayashi discloses a ceramic receiver for use with ceramic powder, which is naturally of irregular size and shape, capable of radiating far infrared rays or piezoelectric ceramic material (col. 3 lines 19). Said materials are to be used to increase the washing activity of water in a washing machine. Furthermore, in figures 5 and 6, Kobayashi shows said powder in the form of balls 5. Therefore it would have

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been obvious to modify Roberts and Kobayashi and include ceramic media in the form of balls or a powder-like particulate in order to increase the effective surface area exposed to the wash water.

11. Roberts and Kobayashi don't specify the particular ceramic, but do indicate typical ceramics can be used and suggest those which radiate far infrared rays. Kikuta discloses that various ceramics containing alumina and silica are far infrared radiating materials (col. 1 line 16-19). Thus, it would have been obvious to modify Roberts and include aluminum oxide and silicon oxide (alumina and silica) as taught by Kikuta, in the form of particles or beads as taught by Kobayashi, in order to achieve the water activating effect of far infrared radiating materials.

12. In regards to claim 15, sintered bodies are very common throughout the art when the combination of two materials is preferred. Considering that alumina and silica are common infrared radiating materials, it would have been obvious to form the silica/aluminum balls by sintering in order to provide a consolidated structure for placement in a washing machine.

#### ***Allowable Subject Matter***

13. Claim 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The specific claimed design of the ceramic material, having an elastic center and a ceramic exterior, has patentability.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Heckert whose telephone number is (571) 272-2702. The examiner can normally be reached on Mon. to Friday, 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH

  
MICHAEL BARR  
SUPERVISORY PATENT EXAMINER